



DEPARTMENT OF ENERGY
Federal Energy Regulatory Commission

[Docket No. AD20-22-000]

Notice of Availability of Final Engineering Guidelines for the Evaluation of Hydropower Projects: Chapter 17 – Potential Failure Mode Analysis

The staff of the Federal Energy Regulatory Commission (FERC or Commission) has prepared a final “Chapter 17 – Potential Failure Mode Analysis” of its Engineering Guidelines for the Evaluation of Hydropower Projects (Guidelines). This chapter supersedes the portions of “Chapter 14 – Dam Safety Performance Monitoring Program” that pertain to Potential Failure Mode Analysis, and is one of four new chapters of the Guidelines intended to provide additional guidance related to 18 CFR Part 12, Safety of Water Power Projects and Project Works, Docket No. RM20-9-000, Order No 880, issued by the Commission on December 16, 2021.

On July 16, 2020, the Commission issued a Notice of Proposed Rulemaking (NOPR) to revise its part 12 regulations. On the same day, the Commission solicited public review and comment on four new draft chapters of its Guidelines. Draft Chapter 17 was part of that issuance.

The Commission received eight comment letters in response to draft Chapter 17. Most of the comments were submitted by licensees and individuals through trade associations, including National Hydropower Association, Dam Safety Interest Group of CEATI International, and US Society on Dams, as well as the US Army Corps of Engineers. Comments were also received from individual licensees, corporations, and individuals, including David L. Mathews, City of North Little Rock Electric, Central Nebraska Public Power and Irrigation District, and Upper Peninsular Power Company.

In all, the eight comment letters consisted of over 180 discrete comments. The comments received were varied and ranged from requesting clarification of the overall purpose and approach to a Potential Failure Mode Analysis (PFMA) to questions regarding implementation and execution of this revised process. Commenters requested clarification of procedural aspects of performing a potential failure mode analysis and suggested improvements to the potential failure mode process and procedures. Commenters asked the Commission to:

- Consider whether the PFMA process should take more advantage of potential failure modes and information collected from previously performed PFMA workshops;
- Consider integrating the PFMA process and the risk analysis process described in Chapter 18 of the Engineering Guidelines;

- Provide additional guidance to help bound the expanded definition of “failure” as it could create a limitless combination of potential failure modes;
- Provide additional emphasis and guidance to ensure the PFMA team understands how the project works as a system prior to conducting the brainstorming session;
- Provide additional guidance on identifying and screening potential failure modes, including damage state potential failure modes; and
- Provide additional guidance on the qualifications and roles of the PFMA core team members.

Commission staff has considered all comments in finalizing Chapter 17 of the Engineering Guidelines. Based on the comments received, Chapter 17 has been revised to:

- Clarify the application of PFMA for design and construction projects;
- Clarify the qualifications and roles of a PFMA facilitator;
- Clarify the PFMA brainstorming session and provide additional guidance on the PFMA screening processes;
- Provide additional guidance on financial/damage state and asset management potential failure mode categories; and
- Add a new appendix to provide guidance on an approach for evaluating complex systems as part of a PFMA.

All information related to “Chapter 17 – Potential Failure Mode Analysis,” including the draft chapter, all submitted comments, and the final chapter, can be found on the FERC website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on “General Search” and enter the docket number, excluding the last three digits in the Docket Number field (i.e., AD20-22). Be sure you have selected an appropriate date range. The Commission also offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically providing you with electronic notification of these filings and direct links to the documents. Go to the Commission’s website (www.ferc.gov), select the FERC Online option from the left-hand column, and click on eSubscription. Users must be registered in order to use eSubscription.

The final version of Chapter 17 is also available on the Commission’s Division of Dam Safety and Inspections website at: Engineering Guidelines for the Evaluation of Hydropower Projects | Federal Energy Regulatory Commission (ferc.gov).

Information Collection Statement

Chapter 17 includes information collection activities for which the Paperwork Reduction Act, 44 U.S.C. 3501-3521, requires approval by the Office of Management and Budget (OMB). The Commission has included the burden and cost estimates for

information collection activities related to this chapter in the rulemaking document (Docket No. RM20-9-000, Order No. 880. The Commission has designated the information collection activities in the rule as FERC-517. Upon final approval of FERC-517, OMB will assign an OMB Control Number and expiration date.

Send written comments on FERC-517 to the Office of Management and Budget (OMB) through www.reginfo.gov/public/do/PRAMain, Attention: Federal Energy Regulatory Commission Desk Officer. Please identify the OMB control number (1902-TBD) in the subject line. Your comments should be sent within 30 days of publication of this notice in the Federal Register. OMB submissions must be formatted and filed in accordance with submission guidelines at www.reginfo.gov/public/do/PRAMain. Using the search function under the “Currently Under Review field,” select Federal Energy Regulatory Commission; click “submit” and select “comment” to the right of the subject collection.

For assistance with any of the Commission’s online systems, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8258.

Dated: December 16, 2021

Kimberly D. Bose,
Secretary.

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